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SUMMARY OF DOCTORAL THESIS

**THE IMPACT OF THE INTERVENTIONS FOR THE
DEVELOPMENT OF EMOTIONAL INTELLIGENCE ON
EMOTIONAL INTELLIGENCE AND RELATED VARIABLES**

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CHAPTER 1. THEORETICAL BACKGROUND

1.1 Introduction in consideration to the research

Psychological studies from the last 20 to 30 years have shown that emotional intelligence is trainable, influences performance and academical results (O'Boyle et al., 2011), enhances psychological well-being and reduces the risk for anxiety and depression (Sanchez- Alvarez et al., 2015).

The need to establish some clear principles to guide interventions for the development of emotional intelligence have been highlighted by the synthesis studies published on this specific theme (Schutte et al, 2013; Mattingly & Kraiger, 2019). The authors of this studies recommend using mindfulness in this interventions; moreover, the authors of the synthesis studies who parallely investigated emotional intelligence and emotional regulation (Pena-Sarrionandia et al, 2015) recommend optimizing the adaptative strategies for emotional regulation within the interventions for emotional intelligence enhancement.

This paper proposes to evaluate the effect of using mindfulness and other strategies of emotional regulation withing the interventions for the development of emotional intelligence. For this purpose, there have been implemented, assessed and compared the results of multiple types of interventions on the level of emotional intelligence, emotions regulation and psychological well-being in general.

1.2 Emotional intelligence

Definition of emotional intelligence

First definitions of emotional intelligence and its dimensions are presented in 1990 by Peter Mayer and John Salovey, authors renowned for their impact on this specific field in psychology (Mayer & Salovey, 1990). Emotional intelligence is defined as a set of abilities which allow the recognition and proper understanding of one's own emotions and those of the others, handling and using them efficiently. The authors were describing people with emotional intelligence as having a greater openness to their own internal emotional experiences, positive or

negative, and this high level of awareness and handling of self-emotions contributes to a better understanding of the emotions of others and to a higher level of psychological well-being.

There are several ways to conceptualize emotional intelligence, it being defined as a set of abilities or personality predispositions by other researchers (Goleman, 1990). For this paper, the reference model chosen is that proposed by Davies, Stankov & Roberts (1998). These authors are proposing a model of emotional intelligence as a set of abilities:

- to identify, express and understand personal emotions.
- to identify, assess and understand the emotions of others.
- to use emotions to facilitate performance (motivation, self-trust, and emotional inhibition).
- to regulate one's emotions and the emotions of others (monitoring, modulation).

1.2.2. Measurement instruments for emotional intelligence

The measurement for the level of emotional intelligence can be obtained with a series of objective, direct instruments (by measuring performance within relevant emotional tasks) or subjective, indirect instruments (self-assessment and declaring the level of performance during tasks and situations emotionally relevant).

A systematic analysis of the measurement instruments of emotional intelligence (O'Connor, 2019) proposes the following criteria for choosing a proper instrument:

- The measurement instrument has to be based on a theoretical model evidence based
- The type of instrument to be adapted for the purpose of the research
- To have been used in multiple academic studies published in quality scientific papers
- To be proven to have good psychometric properties
- The construct validity and the predictive validity to be well documented
- To be translated and adapted for the population in question
- To be practical (easy to administer, complete and scoring)
- To be free of charge, if this aspect is relevant.

In the research presented in this paper, for the measurement of emotional intelligence have been evaluated a series of specific instruments:

MSCEIT Scale (Mayor, Salovey & Caruso, 2002), objective instrument with the following dimensions: perception and identification of personal emotions and the emotions of others; understanding of emotions; handling of personal emotions and the emotions of others, usage of emotions.

SREIS Scale (Schutte, 1998) has 33 self-assessment items and targets the following dimensions: assessment and expression of personal emotions and the emotions of others; using emotions and emotional regulation. For this scale's replication, the results have been discrepant regarding the number of dimensions (Petrides & Furnham, 2000, Austin et al., 2004).

Wong and Law Emotional Intelligence Scale - WLEIS (Law, Wong & Song, 2004), has 16 items and has been elaborated after Davies's model (Davies et al., 1998), contains also a sample for third parties (Libbrecht et al., 2010, has been used in multiple studies in different cultures (Libbrecht et al., 2014) and has a very good construct and predictive validity.

Situational Test of Emotion Management-STEM Scale and Situational Test of Emotional Understanding-STEU Scale (MacCann and Roberts, 2008) asses the abilities for emotional intelligence by presenting emotionally relevant situations and listing selected response alternatives.

Workgroup Emotional Intelligence -WEIP III (Jordan et al., 2002), it is a scale for emotional intelligence, the self-report, based on the theoretical model of Mayer and Salovey in 1990 (Mayer & Salovey, 1990) and it is meant to assess emotional intelligence in an organizational context.

From the analyzed instruments, only the first three have been translated and validated for Romanian population. In this paper the WLEIS scale has been used ((Law et al., 2004) paralleled with the attempt to build a new instrument, self-reporting, destined to evaluate emotional intelligence, including the ability to assist other people in emotional regulation (dimension not found in the analyzed instruments).

1.2.3. The development of emotional intelligence with specific psychological interventions

Interventions for the development of emotional intelligence take place in various contexts, such as educational, for children and adolescents (Nélis, et al., 2011; Ruini et al., 2009), or in organizational context, meant for employees and managers (Cherniss, Grimm & Liautaud, 2010; Slaski & Cartwright, 2003).

There are already a series of synthesis studies that analyze the types of interventions for the enhancement of emotional intelligence and their results.

Schutte and his collaborators (Schutte, Malouff & Thorsteinsson, 2013) have analyzed in 2013 four experimental studies, randomized, with a sample of 435 people and shown that the effect obtained on emotional intelligence is one of enhancement and optimization compared to other types of interventions for the development of human potential (Sin & Lyubomirsky, 2009).

Another synthesis study (Hodzig et al, 2017) analyzed 24 experimental studies with a sample of 1986 people and shown that the effect of the interventions varies depending on the emotional intelligence model considered, the best results being obtained for the interventions based on abilities model.

Another synthesis model (Mattingly & Kraiger, 2019) has analyzed 50 studies with a sample of 2136 people and assessed the effects of various techniques used in intervention, showing that participants have a better development of emotional intelligence when the training is an active one, with exercises and personalized by feedback.

As a result of the studies, researchers recommend the usage of this type of interventions besides the traditional techniques for mindfulness, because this facilitates the acknowledgment of emotions and because there is a strong connection between emotional intelligence, mindfulness, and psychological well-being (Schutte & Malouff, 2011).

Hodzig and his collaborators (Hodzig et al, 2017) recommend the assessment of the impact of these interventions on emotional distress and making them particular for vulnerable categories (professors, doctors, social workers, unemployed), assessing the reduction of emotional regulation difficulties for negative emotions.

1.2.4. The influence of emotional intelligence on performance, relationships and health

There is a high number of synthesis studies which show that emotional intelligence is a form of intelligence that can be measured and developed, with an impact on academic performance, social and professional one, on health and life satisfaction.

O'Boyle and his collaborators (O'Boyle et al, 2011; Joseph, Newman & O'Boyle, 2015) have shown that emotional intelligence has a medium correlation with the indicators of work performance, the correlation being stronger with self-reporting measurement instruments.

Emotional intelligence has also a considerable impact on academic performance (Qualter et al, 2007) and truancy, risk behaviors and abuse are present on a lower level in students with a high level of emotional intelligence.

The relationship between emotional intelligence and health is also a significant one (Schutte et al, 2007), especially for mental health (Martins et al, 2010).

The synthesis studies highlight a significant impact, moderate, of emotional intelligence on psychological well-being (Malouff et al, 2014, Sánchez-Álvarez, 2016), including on relationships satisfaction in general (Schutte, Malouff & Bobik, 2001) and in couples ($r= 0,32$, Malouff & Schutte, 2014).

On the other hand, the relationship between emotional intelligence and psychological distress (depression, anxiety, stress) is reversed, moderate, significant (Fernandez-Berrocal et al., 2006; Fernandez-Berrocal & Extremera, 2016).

1.3. Emotional regulation, more than a facet of emotional intelligence

Emotional regulation includes the abilities to handle personal emotions and to assist others in the process, called social regulation of emotions (Reeck, Ames & Ochsner, 2016) or interpersonal regulation (Zaki & Williams, 2013).

Regulation of personal emotions is a process by which an individual, aware or not, does emotions regulation and emotional response regulation so as to properly respond to the demands of the environment (Gross & Munoz, 1995; Gross, 1998; Rottenberg & Gross, 2003, Bargh & Williams, 2007).

Synthesis studies (Aldao, Nolen-Hoeksema, Schweizer, 2010; Schäfer et al, 2016) have shown that some strategies are adaptative, whereas others are dysfunctional, associated especially with symptoms of depression and anxiety. Aldao and his collaborators (Aldao et al, 2010) present as adaptative strategies of emotional regulation the cognitive re-evaluation, problem solving and mindful acceptance and for dysfunctional strategies suppressing thoughts and emotions, avoidance and rumination.

Mindful acceptance , a non evaluating manner of emotion, the third adaptative strategy, entitles individual's willingness to explore present experiences without assessing them, with acceptance and is associated with beneficial effects on the individual (Hayes et al., 1999; Heffner, Eifert, Parker, Hernandez, & Sperry, 2003). Studies have shown that a low level of acceptance of emotions is found in individuals with generalized anxiety disorder (Roemer et al., 2008), panic disorder (Tull & Roemer, 2007) and borderline personality disorder (Gratz, Rosenthal, Tull, & Lejuez, 2006).

The lack of abilities and proper strategies to regulate emotions are called by Gratz and Roemer (2004) "emotional dysregulation."

Besides knowing and applying strategies , another aspect that influences the ability to regulate emotions is perceived self-efficacy of emotional regulation. Self-efficacy related to emotional regulation is strongly related to the general level of emotional intelligence and empathy, with the level of positive and negative emotions, but also with psychological well-being ((Bandura et al, 2003, Kirk & Schutte, 2008).

Self-efficacy related to emotional regulation can explain up to 35% from the variation for symptoms of depression, anxiety and stress and up to 43% out of the variation for psychological

well-being, for both variables this being more important (Călinici, Unk & Călinici, 2020). It has been proven that optimization of self-efficacy of individuals related to various types of tasks can be done by practicing, feedback and even online educational programs (Parsons, 2007; Călinici, Călinici & Miclea, 2017).

Another important aspect for emotional regulation refers to the abilities to assist others in their emotional regulation (**social regulation of emotions**). The relevance of this is obvious for couples' relationship, in organizations and especially in the professional relationship with individuals at risk, ill people, elders, those with a psychiatric pathology (Goldstein & Volkow, 2011).

Reeck and his collaborators (Reeck, Ames & Ochsner, 2016) have proposed as a reference for the processes that takes place in social regulation of emotions a model adapted after the modal model of emotions (Gross, 1998). Social regulation of emotions helps improve personal emotional regulation and reduces psychological distress (Doré et al., 2017).

1.4. Mindfulness techniques and their connection to emotional intelligence

The mindfulness process is defined as a state of awareness, in which intentional observance takes place, in a non-evaluative manner but one of acceptance of day to day personal experience (Kabat-Zinn, 1994).

Mindfulness techniques have been integrated in multiple protocols for cognitive-behavioral psychotherapy (ex. Dialectical behavioral therapy - DBT, Linehan, 1993; Acceptance and commitment therapy - ACT, Hayes & Wilson, 1994; Mindfulness Based Cognitive Therapy – MBCT, Segal, Williams & Teasdale, 2002).

Studies have shown that mindfulness techniques are efficient in reducing anxiety (Green & Bieling, 2012; Hofmann, Sawyer, Witt, & Oh, 2010), symptoms of depression (Strauss, Cavanagh, Oliver, & Pettman, 2014), stress Chiesa & Serretti, 2009), chronic pain (Grossman, Tiefenthaler-Gilmer, Raysz, & Kesper, 2007) but also in enhancing life satisfaction (Godfrin & van Heeringen, 2010; Kuyken et al., 2008).

For the present paper a few mindfulness techniques have been chosen and also an instrument for assessment specific to Acceptance and Commitment Therapy (ACT), which promotes mindful emotional regulation, openness to emotions and engaging in activities according to personal beliefs (Hayes et al., 2006).

1.5. Psychological well-being and its connection to emotional intelligence

There are two major theoretical approaches in psychology for the concept of psychological well-being: a hedonist one, focused on positive emotions and an eudaimonic one, inspired by the humanistic paradigm, focused on self-realization of human potential and on the feeling of a meaningful life. Each theoretical approach has specific measurement instruments.

For the hedonistic approach the most used measurement instrument is Life Satisfaction Questionnaire (Subjective Well-Being, Diener, 1995), and for the eudaimonic approach, Psychological Well-Being - PWB, (Ryff și Keyes 1995) and more recently PERMA-Profilier (Butler & Kern, 2016).

A meta-analysis from 2015 (Sánchez-Álvarez et al, 2015) has integrated the results of 25 studies with a sample of over 8500 participants and has shown that there is a strong connection between emotional intelligence and psychological well-being, especially for the eudaimonic that the hedonist hedonist ($\hat{r}_{\text{eudaimonic}} = 0.35$ versus $\hat{r}_{\text{hedonist}} = 0.29$), this being the reason for which the present paper has evaluated this.

1.6. Relevance of research

For the synthesis studies that analyzed the impact of certain interventions on the level of emotional intelligence (Schutte, Malouff & Thorsteinsson, 2013; Hodzig et al, 2017; Mattingly & Kraiger, 2019) the authors have offered , based on the conclusions, recommendations for further interventions.

This paper proposed to investigate, **firstly**, the effects of mindfulness techniques for the optimization of emotional intelligence, recommended by Schutte and his collaborators (Schutte et al, 2013), whose effect could no be analyzed in the existent meta-analysis , due to insufficient studies in this field (Mattingly & Kraiger, 2019).

Secondly, taken into account the recommendations of the meta-analysis for emotional regulation and emotional intelligence (Peña-Sarrionandia et al., 2015), this paper proposes to investigate the effect of teaching participants to use more adaptative strategies of emotional regulation (Aldao et al., 2010), including strategies for social regulation of emotions (Reek, Ames & Ochsner, 2016).

Thirdly, in order to take into account another important recommendation of the authors the present paper has also assessed the impact of certain interventions on psychological distress and psychological vulnerability.

CHAPTER II. Research objectives and methodology

The research process presented in this paper targets the impact of various types of interventions for the optimization of emotional intelligence on the dimensions of emotional intelligence and related psychological constructs presented in the previous chapter (emotional regulation dysfunctions, self-efficacy related to emotional regulation, level of distress and psychological well-being).

To evaluate this impact there have been implemented three programs of specific interventions, two of them selected and translated from the one described in the literature and a new, built one.

For the assessment of the results of these interventions there have been selected and, where necessary, translated, adapted or created, adequate psychological instruments.

Summarizing, the objectives of this research are:

1. Building a self-reporting instrument for emotional intelligence and its dimensions, including the social regulation of emotions.
2. Translating and validating on Romanian population a series of psychological instruments which assess related psychological constructs, possibly impacted by the intervention programs that enhance emotional intelligence.
3. Assessment and comparison of the effect of the interventions on the dimensions of emotional intelligence and related psychological constructs, with a few other minor objectives:
 - 3.1. Selection, translation and adaptation of specific intervention programs described in the literature.

- 3.2. Creating a new intervention program, focused on the strategies of emotional regulation.
- 3.3. Assessment of the impact of mindfulness techniques in the interventions for emotional intelligence enhancement on the dimensions of emotional intelligence and related psychological constructs.
- 3.4. Assessment of the impact of instructing for the usage of multiple emotional regulation techniques, including social regulation of emotions on the dimensions of emotional intelligence and related psychological constructs.

METHODOLOGY

For the construction and translation/ adaptation of psychological instruments there were respected the recommendations and the standards in the literature (Hambleton, 2001, A.P.A., 2014).

For the adaptation of the intervention programs and also for the creation of a new program there were taken into account the theoretical background, the conclusion of the synthesis studies and the recommended techniques for this type of programs, which were presented in the first chapter of this paper.

For the assessment of the impact of interventions for the optimization of emotional intelligence on the key variables a interventional study was created (presented as Study 5, in the next chapter), randomized, in which the participants were positioned randomly in the following study conditions, three interventional and a control group.

In the assessment of the results of the interventions there have been used a series of instruments for the measurement of the impacted psychological constructs, with a newly built questionnaire for self-reporting for emotional intelligence and three instruments that were translated and adapted on Romanian population.

Next, there will be a short presentation of the measurements of psychological assessment used in this paper (Anex 3), mentioning that the newly built instrument and those translated/adapted are presented in detail in the next chapter, Study 1 - CEIS - Cluj Emotional Intelligence Scale (Calinici et al., 2020), Study 2 – PERMA Profiler (Butler& Kern, 2016), Study 3 - RESE-R (Caprara et al., 2008) and Study 4 – CompACT (Francis et al, 2016).

Wong and Law Emotional Intelligence Scale WLEIS (Law et al., 2004) it is a self-report instrument, elaborated after the Davies model (1998) , has 16 items, 4 for each dimension : assessment of personal emotions (identification and understanding); assessment of the emotions of others (identification and understanding), using emotions (especially for self-motivation) and emotional regulation (for personal emotions).

MCDS (Marlowe and Crowne, 1964) is one of the most used questionnaires which measures social desirability.

The instrument has been translated and adapted for various populations, including for Romanian population (Sârbescu, Rusu & Costea, 2012).

Toronto Alexythymia Scale TAS 20 (Taylor et al., 1988) is a questionnaire with three subscales which assesses the level of alexithymia, defined by three factors: difficulty in identifying emotions, difficulty in describing emotions and a way of thinking oriented to external factors.

The scale has been translated and used including in Romanian studies (ex. Morariu, Ayearst, Taylor & Bagby, 2013). For this paper there was only used the scoring for the first two dimensions of the scale, those related to identification, describing and understanding of personal emotions.

Difficulties in Emotion Regulation Scale DERS-SF (Kaufman et al., 2016) is the short form of the DERS Scale (Gratz & Roemer, 2004), which assesses the difficulties of emotional regulation in clinical and non-clinical population by six factors: difficulties in the awareness of personal emotions, difficulties in understanding personal emotions, difficulties in accepting personal emotions, difficulties in having proper strategies of emotional regulation, difficulties in finishing certain activities if negative emotions occur, difficulties in handling personal impulses.

The scale has been used in multiple studies, translated in many languages (ex. French – Dan Glauser, 2012, Spanish- Gómez-Simón, 2014) , used also in studies on Romanian population (Voinescu, Szentagotai & David, 2013, Prefit & Szentagotai-Tătar, 2018).

Psychological Well-Being PWB (Ryff & Keyes, 1995) is a self-reporting questionnaire, representative for the measurement of eudaimonic psychological well-being and it was translated and used in multiple studies, including on Romanian population (Costea et al., 2018).

Depression, Anxiety, Stress DASS 21 (Henry & Crawford, 2005) is one of the most well-known instruments for assessing emotional distress aspects and levels of depression, anxiety and stress.

Scala DASS -21 (presented in Annex) has been used in multiple studies including on Romanian population (Perte & Miclea, 2011, Tomşa, Jenaro, Campbell & Neacşu, 2013).

Acceptance and Action Questionnaire AAQ-II (Bond et al., 2011) is one of the first and the most known questionnaires which evaluates psychological inflexibility, translated and used in multiple studies, including on Romanian population (Szabó et al., 2011).

- Satisfaction with Life Scale – SWLS (Diener et al., 1985) is one of the most known instruments to evaluate life satisfaction, translated and used in multiple studies, including on Romanian population (ex. Stevens et al., 2014).

CHAPTER III. ORIGINAL RESEARCH CONTRIBUTIONS

Study 1. Building and validating an Emotional Intelligence Scale

The newly built scale is called Emotional Intelligence Scale Cluj (CEIS, Calinici et al., 2020), is based on the Davies and collaborators model in 1998 and its purpose is to assess emotional intelligence and its facets, including the abilities for social regulation of emotions, in a manner that is concise and as stable as possible from a factorial point of view. In building this scale all recommendations from literature have been followed, there was a collaboration with three experienced psychologists, who received a synthesis of the theoretical background, with the definition of dimensions and the aspects involved in each of it (as in the following table) and a short list of bibliographic materials.

Table 1. Emotional intelligence dimensions

Dimension	Aspects taken into account
Identifying and understanding of personal emotions	<ul style="list-style-type: none"> - Identifying, expressing and producing emotions - Verbal and non-verbal expression of emotions - Understanding emotions, their causes, alteration and consequences, - Predictions for behavior dependent on the emotions

Identifying and understanding the emotions of others	<ul style="list-style-type: none"> - Recognizing the expression of another person's emotions - Detecting false display of emotions - Understanding emotions, causes, alterations and their consequences - Predictions for behavior dependent on the emotions
Using emotions	<ul style="list-style-type: none"> - Using personal emotions in communication, decisions, purposes - Using personal emotions for facilitating performance (self-motivation, self-encouragement) - Inducing emotions and using them in relationships - Modulation of an emotional expression serving a purpose
Emotional regulation (personal or for others)	<ul style="list-style-type: none"> - Emotional regulation for personal emotions and using optimal strategies (self-control) - Assisting others in emotional regulations (including in tense situations)

It has been created a scale with 40 items and after an expert panel review only 24 items were maintained, this being the version used for the validation studies.

Validation of the new scale for emotional intelligence

The analysis of the psychometric properties of the new scale has been done by a succeeding administration, along with other relevant instruments, in three samples of participants (Calinici, Calinici, Balazs & Miclea, 2020).

Procedure: The participants have been recruited on a volunteering basis, by advertisements on social media and professional platforms (Facebook and LinkedIn). They were invited to fill in online, using Google Forms, with no time limit, a series of questionnaires. Before filling in the questionnaires, the participants were given the consent form, ethical notice of the research and the declaration for using personal data. There were no rewards involved.

In the following table is presented a concise structure for the steps of the validation for the new scale

Table 2. Steps in analyzing psychometric properties of CEIS - Cluj Emotional Intelligence Scale

Lot	Objective	Method
LOT 1 (217 participants)	Construct analysis	EFA (Exploratory factor analysis)
LOT 2 (216 participants)	Confirmation factor structure	CFA (Confirmatory factor analysis)
	Convergent validity	-correlation with WLEIS (Law et al., 2004)
	Discriminative validity	-correlation with MCSDS (Marlow & Crowne, 1964)
LOT 2.1 (75 participants)	Stability of the scale	- test - retest correlation
	Divergent validity	-correlation with DERS-SF (Kaufman et al., 2016)
	Divergent validity	-correlation with TAS-20 (Taylor et al., 1988)
LOT 3 (164 participants)	Factor structure replication	CFA (Confirmatory factor analysis)
	Concurrent validity	-correlation with PWB (Ryff & Keyes, 1995)

Results

The construct validity was assessed by item analysis, exploratory factor analysis and confirmatory factor analysis. Through exploratory analysis after the application in Lot 1 there was selected a version of a scale with 19 items distributed on five dimensions, tested afterwards in the next lots. For the data obtained in lot 2 the indices of the confirmatory analysis are: $\chi^2=306.24$ (df=146), $p < .001$, RMSEA = .072, CFI = .934, TLI = .922. All the items have strong correlations, significant with their dimensions, and the correlations of the emotional intelligence dimensions are also strong and significant. In the third lot we obtained the following matching indices: $\chi^2=243.53$ (df=146), $p < .001$, RMSEA = .064, CFI = .947, TLI = .938. The model

presented items correlations and dimensions correlations comparable to those obtained in the previous study.

To test the psychometric properties of CEIS we analyzed the correlations between the scores of the new scale and the relevant instruments, parallelly administered, to see if they relate in an adequate manner (according to data in the literature) with the scores of relevant psychological tests.

The stability indices for the new scale are good, alpha Cronbach is .9 for the scale and between .79 and .89 for the dimensions, the test-retest correlation between the CEIS scores of the participants in lots L2 and L2.1 in a months time, is strong, statistically significant ($r = .83$, $p < .01$).

Convergent validity is estimated by calculating CEIS scores with the WLEIS scores, per total and per dimension, obtained in the second lot.

Correlations are very strong, statistically significant ($r = .8$, $p < .01$), with the exception of two dimensions which are distinctly operationalized in the WLEIS scale (the dimension *Using emotions*, which in the WLEIS scale refers only to self-motivations and the dimension *Assisting others in emotional regulation*, which does not have a correspondent in the WLEIS scale).

Discriminant validity is estimated through the correlation between the CEIS scores and the MCSDS scores, correlation which is not statistically significant, so there are no overlaps between emotional intelligence measured by CEIS and social desirability.

Divergent validity of the dimensions regarding personal emotions is estimated through the correlations with TAS-20 and DERS-SF, in lot L2.1 ($r = -.48$ and $r = -.49$, $p < .01$).

Concurrent validity, assessed in relationship with psychological well-being is moderate, statistically significant ($r = .37$, $p < .01$), with a strong connection between the dimensions Identifying and understanding the emotions of others and Regulation of other's emotions with the dimension Positive relationships from the psychological well-being scale PWB ($r = .30$, $r = .36$, $p < .01$).

Discussions and conclusions

Based on the literature, the utility of a new measurement instrument for emotional intelligence has been pointed out, as a set of abilities, in a concise form, a self-reporting one, which also measures the ability to assist other in the process of emotional regulation.

The validity of the instrument newly built, CEIS (Cluj Emotional Intelligence Scale) was tested using three samples of participants and the results showed a stable factorial structure with five dimensions. There is an extra dimension than in the initial model because the ability to assist other in the process of emotional regulation appeared as a separate dimension on the exploratory factor analysis, aspect seen in other studies as well (Jordan et al., 2002), tested and reconfirmed afterwards in other two sampled through confirmatory factor analysis.

The fidelity of the instrument in terms of internal consistency and test-retest stability is a very good one. The assessment of relationships between the new instrument and other relevant scales provided premises for good convergent, discriminative and concurrent validity.

I believe the newly built scale is useful for both researchers and practitioners. Because of the stable assessment of the levels of each dimension, the scale can be used in research, and its characteristics (easy to administer and score) recommends it to practitioners, especially those involved in the assessment, selection and education of personnel from fields of activity with high emotional content (doctors, social workers, professors), who are more exposed to burnout (Maslach et al., 1986).

Replicating the results in other samples, more diverse, could be extremely useful in order to consolidate the results of this studies, which show that the new scale measures emotional intelligence accurately and with fidelity, being a valuable instrument for both practice and research.

Study2. PERMA Profiler (Butler & Kern, 2016) – Translation and validation for Romanian population

The second objective of this research is represented by the translation and adaptation of psychological instruments that assess constructs strongly related to emotional intelligence and

that are very likely impacted by the psychological interventions for emotional intelligence enhancement.

In this paper we used also PWB (Ryff, 1995) for the measurement of psychological well-being in the validation of the news CEIS scale, but for the intervention step we chose to translate and validate PERMA-Profiler because of the considerably smaller number of items.

PERMA –Profiler Instrument (Butler & Kern, 2016) has 23 items, measured on a Likert scale from 1 to 10 and assesses five dimensions: positive emotions (P), engaging in relevant activities (E), quality of relationships (R), a feeling of meaningful life (M), accomplishments (A) and also negative emotions and health (3 items for each), loneliness and happiness (1 item for each).

The psychometric properties of the instrument are presented in detail in a series of articles (Khaw & Kern, 2014; Kern, Waters, Adler & White, 2015; Coffey, Wray-Lake, Mashek & Branand, 2016, Butler & Kern, 2016).

Translation from English was done according to the ITC rules for translation and cultural adaptation (Hambleton, 2001).

Method of validation

The assessment of the psychometric properties of the Romanian version of the PERMA-Profiler questionnaire was made after we administered it together with other assessment instruments in the study.

Participants: 130 volunteers, medium age 22.4 years, standard deviation 4.2, 58% females, 59% students.

Measurement instruments: PERMA Profiler and PWB (Ryff, 1995).

Procedure: Participants were recruited on a volunteering basis through advertisements on social media and we used Google Forms to be filled online, with no time limit between the two questionnaires.

Data analysis: The collected data was analyzed using SPSS 25 and Amos 21.

The **fidelity of the assessment** with PERMA-Profilier of the operationalized construct is represented by the α parameters of internal consistency for the entire questionnaire and for each minor dimension.

To assess the **construct validity**, we tested the factor structure of the model presented by the authors, using confirmatory factor analysis.

To assess the **convergent validity**, we evaluated the correlations between the PERMA-Profilier scores and those of another instrument well-known to evaluate psychological well-being, PWB (Ryff, 1995), and the results were compared with those reported by other authors.

Results

Descriptive statistics: the medium scores (and standard deviation) for each subscale are: for Positive Emotions (P) 7.45 (1.44); for Engaging (E) 7.4 (1.43); for Relationships (R) 7.90 (1.54); for Meaning (M) 8.14 (1.36) and for Accomplishments (A) 7.27 (1.34). These scores are comparable to those found in other studies ((Wammerl et al, 2019).

In regards to the items analysis, the results have proven that the items show high correlations with the dimension they pertain to (over .51, $p < .001$), and the five dimensions show medium, significant correlations among them. Through the confirmatory analysis of the model, the following matching indices were obtained :

Chi-square = 167.720, df (80), $p < .001$, TLI = .90, CFI = .91, RMSEA = .08.

The assessment of the convergent validity was done by analyzing the relationship between the PERMA-Profilier scores and the PWB scores, the correlation between the total scores of the two instruments being significantly high (.68, $p < .001$).

Discussions and conclusions

The medium and the internal consistency of the PERMA-Profilier instrument are consistent with the values obtained in other studies, the internal consistency of the instrument being a good one ($\alpha = .83$ per total and between .70 and .84 for the subscales). The factor

structure shows margin indices with an acceptable matching with the model proposed by the authors.

The convergent validity has very good premises, the correlation between the PERMA-Profiler and PWBS (Ryff, 1995) are very strong, significant, especially between the three equivalent subscales (relationships, meaning and accomplishments). In conclusion, PERMA-Profiler is a stable instrument, with good psychometric properties, that can be used in the assessment of psychological well-being for the adult, healthy, Romanian population.

Study 3. RESE-R (Caprara et al., 2008) -Translation and validation on Romanian population

The RESE questionnaire is based on the self-efficacy theory (Bandura et al, 2003) and it refers to the trust that the individual has that he is able to adequately regulate its positive and negative emotions (Caprara et al, 2008).

RESE has 12 items, 4 for each factor (POS Self-efficacy in positive emotions regulation, ANG -Anger, DES Despondency – Distress, measured on a Likert scale from 1 to 5 where 1=not at all and 5= very often (Items examples: Can you freely express feeling good at a party? Do you manage not to be dejected when you are alone?)

The RESE questionnaire was translated and adapted on German population (Gunzenhauser et al, 2013), the final version having only 10 items RESE – R Revised Regulatory Emotional Self-Efficacy), with psychometric properties and factor stability superior to the original version, this being the reason that we used this version for this paper (Călinici, Unk & Călinici, 2020).

The translation from English to Romanian of the RESE-R questionnaire was made according to the ITC regulations for translation and cultural adaptation (Hambleton, 2001).

Method of validation

The assessment of the psychometric properties of the RESE-R version in Romanian was made after the administration of it with other selected instruments to a sample of participants relatively representative for Romanian population. For the assessment of the construct validity we tested the factor structure of the model presented by the authors using confirmatory factor analysis.

Participants: 151 participants, volunteers, medium age 23, 6 years, standard deviation 3,6, 74% women, 69% students.

Instruments: RESE-R, DASS 21 and PERMA- Profiler.

Procedure: Participants were recruited on a volunteering basis through advertisements on social media and we used Google Forms to be filled online, with no time limit between the three questionnaires.

Results:

The medium and standard deviation are: (DES= 2.77 (ab.st. 1.01), ANG = 2.91 (1.08), POS = 3.87 (0.90). The internal consistency for the subscales is $\alpha(\text{POS}) = .80$, $\alpha(\text{DES}) = .69$, $\alpha(\text{ANG}) = .70$ and $\alpha(\text{NEG}, 6 \text{ items}) = .80$. The results are comparable to those reported in other studies (Gunzenhauser et al., 2013).

For the three-factor model, described by the authors, we have the following results of the confirmatory factor analysis: CFI = .97, TLI = .97, RMSEA = .05 and the correlation between the two-subscale referring to negative emotions regulations (anger and sadness) is very high (.90, $p < .001$).

The **concurrent validity** was pointed out by analyzing its relationships with the psychological distress and positive emotions, the correlations obtained being significant, medium (-.46, resp. -.47, $p < .001$ for the dimensions ANG and DES with DASS-20 and .59, $p < .001$ between RESE POS and Positive emotions – PERMA).

Discussions and conclusions

The medium and standard deviation for the obtained scores in the Romanian population sample is comparable to those reported by other authors (Caprara et al, 2008; Gunzenhauser et al., 2013).

Moreover, the internal consistency has values similar to those reported by other authors like Gunzenhauser (2013): $\alpha(\text{POS})=.79$, $\alpha(\text{DES})=.69$, $\alpha(\text{ANG})=.68$ și $\alpha(\text{NEG, 6 items})=.72$. The results of the confirmatory factor analysis show a very good matching between the data obtained for the Romanian population sample and the three factors model described by the authors for this construct.

The concurrent validity, evaluated in relation to relevant psychological constructs has indicators comparable to those reported in literature (Bandura et al., 2003).

In conclusion, the results confirm this is a stable instrument, with good psychometric properties, and recommend its usage for the adult, healthy, Romanian population.

Study 4. CompACT (Francis et al., 2016)

Translation and validation on Romanian population

The Comprehensive Assessment of ACT Processes - CompACT (Francis, 2016) questionnaire assesses the conscious behavior, similar to mindfulness, but also the level of openness to experiences and acting according to values, the score being interpreted as a level of psychological (emotional) flexibility. The CompACT evaluated psychological flexibility through 23 items distributed on three subscales (Openness to experiences, Mindful behavior, Acting according to values). Items are measured on a Likert scale from 0 to 6 (a part of them being measured backward).

The translation and adaptation of this for Romanian population offers a multidimensional alternative for the assessment of the psychological constructs specific to ACT, in which there are lot of studies and interventions taking place, but for Romanian population the most used is AAQ-II (Szabó et al., 2011).

The translation from English to Romanian of the RESE-R questionnaire was made according to the ITC regulations for translation and cultural adaptation (Hambleton, 2001).

Method of validation

The assessment of the psychometric properties of the CompACT version in Romanian was made after the administration of it with other selected instruments to a sample of participants relatively representative for Romanian population.

Participants: 168 volunteers, medium age 32,7 (standard deviation 8.4, minimum age 19, maximum age 53), 68% females, 17% students, 5% unemployed, 62% live in the city.

Measurement instruments: CompACT and the versions translated and adapted for Romanian population of Acceptance and Action Questionnaire AAQ-II (Bond et al., 2011) and Satisfaction with Life Scale SWLS (Diener et al., 1985).

Procedure: Participants were recruited on a volunteering basis through advertisements on social media and we used Google Forms to be filled online, with no time limit between the three questionnaires.

The data collected was analyzed through SPSS 25 and Amos 21. For the assessment of the fidelity of Romanian versions we calculated the internal consistency indices of the questionnaire and its dimensions.

For the assessment of the construct validity we tested the factor structure of the model presented by the authors, using confirmatory factor analysis.

For the assessment of the divergent validity we analyzed the scores between CompACT and those of another instrument AAQ-II (Bond et al., 2011), which evaluate the same construct, and the concurrent validity was assessed through the relationship between the CompACT scores and the SWLS (Diener et al., 1985) scores.

Results

The descriptive parameters and the internal consistency of the Romanian version of CompACT are similar to those reported by the authors of the instruments (for example for alfa Cronbach the values were between .8 and .87).

The results of the CFA analysis for the three dimensions model proposed by the authors are: : $\chi^2= 401.119$, $df= 221$, $p<.001$, $TLI =.90$, $CFI =. 91$ and $RMSEA = .07$. The factor structure has

margin indices similar to the theoretical model and can be thus used for Romanian population, and the testing of a shorter and more stable version of the instrument will be useful (Călinici & Călinici, 2021), accepted for publication in *Journal of Evidence-Based Psychotherapies*, October 2021).

The **divergent validity** is highlighted by the relationship between CompACT and AAQ II. The correlation parameter between the scores is high, significant (-.71, $p < .001$). The **concurrent validity** in relationship to life satisfaction is a good one (the correlation CompACT with SWLS is .45, $p < .001$).

Discussion and conclusions

The Romanian version of the CompACT questionnaire has very good internal consistency parameters and the correlations between CompACT, AAQ-II and SWLS scores are similar to those presented in other studies (Francis et al., 2016, Lucas & Moore, 2019).

The divergent validity is good (the correlation with AAQ-II is very strong, significant) as well as the concurrent validity (the correlation with SWLS is medium, significant). The dimensions of the questionnaire are strongly related to the total score (between .77 și .80, $p < .001$) and the three dimensions model proposed by the authors presents margin indices, acceptable, matching, which recommends using the translated version of CompACT for the adult, non-clinical Romanian population.

Study 5. The assessment of the impact of the interventions for the development of emotional intelligence on its dimensions and adjacent variables

The main objective of this research is to assess the impact of the interventions for the development of emotional intelligence related to the techniques used, on its dimensions and adjacent variables.

The assessment of the impact of using mindfulness techniques was done by comparing two interventions for emotional intelligence optimization, presented in the literature, one of which using mindfulness practices.

To assess the impact of using emotional regulation strategies, especially social regulation of emotions on the dimensions of emotional intelligence and adjacent variables a new type of intervention for the optimization of emotional intelligence was created, based on the results of the synthesis studies and focuses on using multiple techniques for emotional regulation (mindfulness, social regulation of emotions).

The study formulates 4 hypotheses with reference to the effect of interventions on emotional intelligence and adjacent variables and also to the utility of the techniques used in interventions, hypothesis which will be presented and discussed in this summary in the results section.

Method

Participants

For constructing the participant sample online advertisements were posted on social media and Facebook pages of the Faculty of Medicine Iuliu Hatieganu and of Babes-Bolyai University in Cluj Napoca. 292 people applied to participate in the study, 74% females with a medium age of 21,95, standard deviation 4,79, minimum 18 years old, maximum 49.

The participants filled in emotional intelligence questionnaire WLEIS (Law et al., 2004), the desirability scale MCDS (Sârbescu et al., 2012) and the questionnaires related to the exclusion criteria, the psychological flexibility CompACT scale (Francis et al. 2016) and the psychological distress scale DASS 21 (Henry & Crawford, 2005).

Inclusion criteria: students that fill in the questionnaires and wish to participate

Exclusion criteria: we did not include in the study participants who had a high score (over 70) for emotional intelligence or participants who scored high at psychological flexibility and mindfulness, the maximum threshold for the CompACT scores was established at 100. The participants with high levels of depression-anxiety-stress (with risk for pathology) were not included, the maximum threshold for DASS-21 was established at 95.

Procedure

A total of 292 persons applied, 160 participants meeting the inclusion and exclusion criteria were selected, and were randomly assigned in one of the four conditions:

- EIT-C Intervention for emotional intelligence optimization (Caruso), 40 persons assigned, 30 persons participated to intervention till the end.
- MBEIT Intervention for the optimization of emotional intelligence through mindfulness techniques (Ciarrochi), 40 persons assigned, 30 persons participated to intervention till the end.
- Emo-Coach Intervention for the optimization of emotional intelligence with mindfulness techniques and emotional regulation strategies, 40 persons assigned, 33 persons participated to intervention till the end.
- Control group (the waiting list), 40 persons assigned, 35 persons assessed at the end of program.

All applicants received feedback related to the scores and if they were selected for the next steps of the study and a few days before we started, those who were selected filled in, online, all the pre-training questionnaires.

Participants filled in also a Confidentiality Agreement and other documents.

Participants were evaluated online before the start of the interventions and face to face after the intervention. The assessment of the maintaining of the progress, after 6 months, was done online, but, unfortunately, the response rate was low (under 10 individuals in each study condition).

Materials and instruments

Presentation of the interventions: The first two types of interventions are selected from literature, translated and adapted and the third one is newly built. The selected interventions are presented in the guide published by Mayer and his collaborators in 2007 (Applying Emotional Intelligence, Mayer & Ciarrochi, 2007). They are entitled: *Emotional intelligence -abilities training* (David Caruso) and *Emotional intelligence and mindfulness training* (Joseph Ciarrochi).

The newly built intervention, **Emo-Coach** proposed to use mindfulness techniques to enhance the openness to emotions and the development of the level of emotional intelligence, but also the adaptative strategies of emotional regulation, including the interpersonal one.

Measurement instruments. The effect of the interventions on EI and adjacent variables was measured through some specific instruments, already presented in this paper:

- To assess the modification of the level of emotional intelligence we used the Romanian version of the WLEIS (Law et al., 2004) questionnaire and the newly built scale CEIS (Calinici et al., 2020).
- To assess the modification for the difficulties and self-efficacy for emotional regulation we used the Romanian versions for DERS-SF (Kaufman et al., 2016) and RESE-R (Gunzenhauser et al.,).
- To assess the modification for psychological flexibility, especially for the level of openness to emotions we used the Romanian version of the CompACT questionnaire (Francis et al., 2016).
- To assess the modification in symptoms of depression, anxiety and stress we used the Romanian version of DASS-21(Henry & Crawford, 2005).
- To assess the emotional well-being, we used the Romanian version of PERMA Profiler (Butler & Kern, 2016).

The interventions were structured in six group meetings (15-20 participants), face to face, on a weekly basis, in a two-hour timeframe and were held by the main researcher and six assistants. The first meeting's purpose was to present the intervention, the trainers and participants and also to sign documents. The actual intervention was held in the next four meetings, and for the last meeting, the sixth, we offered feedback and the final evaluation questionnaires were filled.

Results:

The data obtained by filling in the questionnaires by the participants, before and after the interventions, was later adapted in SPSS.

We calculated post-hoc (with the G power application), taking into consideration the size effect, the power of the study to see if, compared to the control group, at post-interventions, there was a high risk to commit a type 2 error. The power of the study is a good one, for Emo-coach is .90 and for MBEIT and EIT-C is .88.

To establish if the interventions had an effect, we compared the scores of the participants before and after the intervention, for each study condition.

The statistical analysis types test t of the scores pre-post in the control group shows no significant differences after the interventions, but for the experimental conditions of study we obtained significant statistical modifications pre-post for almost all measured dimensions, the results are in the following table:

Tabel 3. Statistical tests pre-post interventions

		Emo-coach, N=33		MBEIT, N=30		EIT-C, N=30	
Scală		Test t	p value.	Test t	p value	Test t	p value
Inteligența Emoțională	CEIS	7,76	0	7,29	0	6,18	0
	WLEIS	10,57	0	5,33	0	4,89	0
Reglare emoțională	RESE-P	5,22	0	2,65	0,01	2,28	0,03
	RESE-N	5,53	0	4,16	0	3,36	0
	DERS-SF	-6,08	0	-4,43	0	-2,16	0,8
Flexibilitate psihologică	CompACT	6,29	0	9,36	0	3,96	0,6
Distress psihologic	DASS-21	-7,79	0	-3,93	0	-3,37	0
Bunăstare psihologică	PERMA	4,65	0	4,29	0	3,56	0

CEIS Emotional Intelligence Scale Cluj, WLEIS Emotional intelligence Scale (Wong & Law, 2004), RESE-R Self-efficacy scale for emotional regulation, DERS-SF Emotional regulation difficulties scale, CompAct - Psychological flexibility , DASS-21 Depression, anxiety and stress Scale , PERMA – Psychological well-being.

We compared the data gathered before the intervention for all four conditions of study, in order to verify if there were initial significant differences. The statistical test One Way Anova showed no significant statistical differences between the variables before the intervention but for the post-interventions the results are significantly statistically different.

For the post-intervention data we did a post-hoc analysis in order to illustrate among which study conditions we obtained the statistically significant differences. It has been calculated the Cohen d index and the Hedges' g, with J correction (Borenstein, Hedges, Higgins, & Rothstein, 2009), recommended for the groups under 50 participants.

Tabel 4. Anova Post Hoc Multiple comparisons (Bonferroni) with control group (Emotional intelligence)								
Scale	With Group	Medium Dif (I-J)	Standard deviation	Sig.	95% Confidence Interval		Size effect	
					Limita inf.	Limita sup.	Cohen d	Hedge g
CEIS Identifying and understanding personal emotions	Emo-Coach	-5.65*	1,21	0,00	-8,89	-2,40	1,04	1,03
	MBEIT	-5.73*	1,24	0,00	-9,06	-2,40	1,16	1,13
	EIT-C	-4.26*	1,24	0,00	-7,59	-0,93	0,79	0,77
Identifying and understanding the emotions of others	Emo-Coach	-4.15*	1,05	0,00	-6,97	-1,33	0,86	0,85
	MBEIT	-3.35*	1,08	0,01	-6,24	-0,46	0,8	0,78
	EIT-C	-3.65*	1,08	0,01	-6,54	-0,76	0,84	0,83
Using emotions	Emo-Coach	-2.77*	0,76	0,00	-4,82	-0,72	0,85	0,84
	MBEIT	-2.43*	0,78	0,01	-4,53	-0,32	0,76	0,75
	EIT-C	-3.46*	0,78	0,00	-5,56	-1,35	1,13	1,11
Personal emotional regulation	Emo-Coach	-3.82*	0,80	0,00	-5,97	-1,66	1,05	1,03
	MBEIT	-2.86*	0,82	0,00	-5,07	-0,65	0,78	0,77
	EIT-C	-3.73*	0,82	0,00	-5,94	-1,52	1,11	1,08
Emotional regulation of others	Emo-Coach	-2.57*	0,81	0,01	-4,75	-0,39	1,29	1,27
	MBEIT	-1,81	0,83	0,19	-4,04	0,42	Ns	Ns
	EIT-C	-2.58*	0,83	0,01	-4,81	-0,34	0,74	0,72
CEIS Total	Emo-Coach	-18.95*	3,41	0,00	-28,09	-9,81	1,26	1,25
	MBEIT	-16.41*	3,50	0,00	-25,79	-7,03	1,21	1,17
	EIT-C	-17.67*	3,50	0,00	-27,05	-8,30	1,24	1,21
WLEIS Identifying and understanding personal emotions	Emo-Coach	-2.73*	0,57	0,00	-4,27	-1,19	1,02	1,01
	MBEIT	-2.39*	0,59	0,00	-3,97	-0,81	0,97	0,95
	EIT-C	-2.55*	0,59	0,00	-4,13	-0,97	1,04	1,01
Identifying and understanding	Emo-Coach	-3.16*	0,51	0,00	-4,52	-1,80	1,15	1,12
	MBEIT	-1.57*	0,52	0,02	-2,96	-0,17	0,66	0,65

g the emotions of others	EIT-C	-2.10*	0,52	0,00	-3,50	-0,70	0,96	0,93
Using emotions	Emo-Coach	-3.18*	0,65	0,00	-4,93	-1,42	1,24	1,21
	MBEIT	-0,50	0,67	1,00	-2,30	1,29	Ns	Ns
	EIT-C	-2.14*	0,67	0,01	-3,94	-0,34	0,73	0,71
Personal emotional regulation	Emo-Coach	-5.23*	0,73	0,00	-7,17	-3,28	1,13	1,12
	MBEIT	-2.74*	0,75	0,00	-4,74	-0,74	0,77	0,75
	EIT-C	3.34*	0,75	0,00	1,34	5,34	0,99	0,96
WLEIS Total	Emo-Coach	-14.29*	1,71	0,00	-18,88	-9,70	1,28	1,27
	MBEIT	-7.46*	1,75	0,00	-12,16	-2,76	0,94	0,91
	EIT-C	-10.13*	1,75	0,00	-14,83	-5,43	1,3	1,26
*. The mean difference is significant at the 0.05 level.								

CEIS Emotional intelligence scale Cluj, WLEIS Emotional intelligence scale Wong & Law

No statistically significant differences were found compared to the control group regarding the development of emotional intelligence, only for the dimensions *Assisting others in emotional regulation* (CEIS) and *Using emotions* (WLEIS) after the MBEIT intervention.

Regarding the modifications related to adjacent variables concerning emotional regulation, compared to the control group the main majority presented statistically significant differences, with the exception of the following dimensions: *Difficulties in emotional regulation due to lack of strategies* (DERS), after the MBEIT and EIT-C interventions and *Difficulties in emotional regulation to lack of acceptance of emotions* and *Difficulties due to lack of perseverance* (DERS) after the EIT-C intervention.

Also, as expected, only the intervention without mindfulness techniques, IET-C did not produce statistically significant modifications regarding the level of *Mindfulness*, *Openness to emotions* and *Cognitive flexibility*.

The third category of measured adjacent variables, assess the level of distress and psychological well-being on which the interventions have provided statistically significant modifications for multiple dimensions, except the following: *Satisfaction with interpersonal relationships* and *The feeling of a meaningful life* (PERMA) after the MBEIT and EIT-C interventions and *Satisfaction over health* and *Satisfaction related to accomplishments* (PERMA) after none of the interventions.

Comparing the scores post -intervention obtained by the participants at the study with the participants in the control group we can test the first two hypothesis of this study.

Hypothesis 1. Emo-coach intervention is efficient in enhancing emotional intelligence level.

This hypothesis is confirmed, after Emo-coach intervention all the dimensions of emotional intelligence, as well as the total score, measured with CEIS and WLEIS, show statistically significant growths compared to the initial scores and compared to the control group. The size effect, compared to the control group is medium to high (the Hedge value varies between 0.84 and 1.27).

Hypothesis 2. The interventions for the optimization of emotional intelligence have an impact on the related variables (difficulties in emotional regulation, emotional self-efficacy, psychological flexibility, distress and psychological well-being).

This hypothesis is confirmed, the data shows that all three types of interventions have brought significant modifications for multiple dimensions of the variables measured.

The multiple comparisons (Bonferroni), between the three types of interventions allow the testing of the last two hypothesis of this study.

Hypothesis 3. The MBEIT intervention has a better impact compared to EIT-C in the optimization of the level of emotional intelligence and measured related variables.

Regarding the modifications brought to the level of emotional intelligence, there are no significant differences between the EIT-C and MBEIT interventions, and regarding the related variables measures there are statistically significant differences between them only in regard to psychological flexibility (*Mindfulness and Openness to emotions*).

In conclusion, hypothesis 3 cannot be confirmed, we cannot conclude that the MBEIT intervention has a better impact than EIT-C intervention in the optimization of the level of emotional intelligence and measured related variables, the only significant differences being those related to psychological flexibility and its dimensions.

Hypothesis 4. The Emo-Coach intervention has a better impact than the other types of intervention in the optimization of the level of emotional intelligence and measured adjacent variables.

The results showed statistically significant differences between the participants at Emo-Coach and MBEIT interventions for the following dimensions: *Emotional regulation of others, Identifying and understanding the emotions of others and Using emotions*.

As far as the measured related variables are concerned, the results showed also some statistically significant differences between Emo-Coach and the other interventions.

Between the Emo-Coach and EIT-C interventions there are significant differences in the reduction of emotional regulation difficulties on two dimensions: *Lack of acceptance of emotions and Lack of perseverance in objectives* and for the enhancement of the level of psychological flexibility on two dimensions as well: *Mindfulness and Openness to experiences*.

Regarding distress and psychological well-being there were statistically significant differences between the Emo-Coach and MBEIT interventions for the dimension *Satisfaction towards relationships* (PERMA).

In conclusion, hypothesis 4 can be confirmed, *the Emo-Coach intervention has a better impact than the other types of intervention in the optimization of the level of emotional intelligence and measured adjacent variables.*

Discussions and conclusions – Study No. 5

The statistical analysis pointed out that all three types of intervention were efficient, the participants presented at the end statistically significant modifications, compared to their initial score and those of the control group, for almost all dimensions assessed.

Regarding the optimization of emotional intelligence, the statistical analysis Anova and post-hoc comparisons (Bonferroni) show that all the dimensions of emotional intelligence are, for all three types of interventions, statistically higher than for the control group, with the exception of the participants from MBEIT, for the following dimensions: Assisting others in emotional regulation (CEIS) and Using emotions (WLEIS).

The post-hoc comparison shows that there are no statistically significant differences between the three types of interventions regarding the dimensions of emotional intelligence, except for the two dimensions for which MBEIT did not obtain significant modifications.

For the first category of measured adjacent variables, difficulties of emotional regulation, the participants in the Emo-Coach presented statistically significant reductions (compared to the control group) for all six types of difficulties, those that participated in the MBEIT for five types and those from the EIT-C group for only one type (Difficulties due to lack of understating of

emotions). The post-hoc comparison shows that there are statistically significant differences between the interventions that use mindfulness (MBEIT and Emo-Coach) and EIT-C for the reduction of the difficulties related to lack of acceptance of emotions and perseverance in objectives when obstacles occur.

Regarding the level of psychological flexibility (mindfulness, openness to experiences and orientation to values) only the Emo-Coach and MBEIT interventions obtained statistically significant modifications compared to the control group.

Regarding the modifications for psychological distress the post-hoc analysis show that all three types of intervention have a significant reduction for the scores of depression, anxiety and stress compared to the control group. There were no statistically significant differences between the three types of intervention.

Regarding the psychological well-being, all three types of intervention produced statistically significant growths compared to the control group, per total and for three dimensions: *Positive emotions*, *Negative emotions*, and *Involvement*. Moreover, the Emo-Coach intervention obtained significant differences compared to the control group for other two dimensions: *Satisfaction towards relationships* and *The feeling of a meaningful life*. Overall, the Emo-Coach intervention proved to be more efficient than the other two.

The effect size obtained in Study 5 for the optimization of the level of emotional intelligence is medium to high (between 0.7 and 1.2), compared to that reported by other studies (Hodzig et al, 2017; Mattingly & Kraiger, 2019) and the size effect on the measured related variables is important, moderate, compared with that reported in other studies for the development of human potential. The size effect for stress reductions (g between .8 and 1), especially for the mindfulness intervention is comparable to that reported by other authors Hofmann et al., 2010).

The main limitation of the study is that there is no sufficient data for the follow up assessment (under 10 participants in each study conditions filled in the questionnaires after 6 months) and we could not evaluate how the effects were maintained over time. Applying EmoCoach in other samples and the assessment over time would consolidate the results obtained in this study.

Chapter IV. CONCLUSIONS AND DISCUSSIONS

In this paper, based on the scientific literature and the research process we tried to answer a series of questions related to the definition and structure of the emotional intelligence construct and the most proper type of intervention for the optimization of it and also other related psychological constructs, like psychological well-being.

The research process in this paper presents firstly a synthesis of the literature on the topic, EI definition, the measurement instruments, related psychological constructs and interventions for optimization.

The objectives of the research regarding the measurement instruments and also the development, implementation and assessment of optimization interventions were met.

By meeting these objectives, the present paper brings new theoretical knowledge regarding the dimensions of emotional intelligence (the new scale, CEIS, has separate dimensions for personal emotional regulation and for others), but also regarding the techniques and strategies of emotional regulation to use in interventions to have a proper effect on emotional intelligence and adjacent variables.

Moreover, this research brings new knowledge for practitioners, by offering a new model of intervention, with scientifically proved results and a set of short instruments, cu tested psychometric properties, easy to administer, adapted on Romanian population, the assess a large number of psychological constructs (emotional intelligence, self-efficacy for emotional regulation, flexibility and psychological well-being).

The results obtained with Emo-Coach have applications that are worth further investigating, for the optimization of human potential in general and in organizations, by reducing stress, enhancing interpersonal emotional intelligence and enhancement of the satisfaction related to relationships.

The impact of the intervention on distress and difficulties of emotional regulation recommends it in the reduction of the vulnerability for burn-out and in the amendment of psychopathology (depression, anxiety, borderline personality disorder), paralleled with psychotherapy.

Applying Emo-coach for various samples of population, clinical and non-clinical and the measurement of the impact on the dimensions of emotional intelligence and related psychological constructs would consolidate the understanding of the effects of the mechanisms of the intervention.

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